

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JIN-SHAN WANG,  
HUIJUAN CHEN and  
STEVEN EVANS

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Appeal 2006-2739  
Application 09/918,584  
Technology Center 1700

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Decided: February 23, 2007

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Before EDWARD C. KIMLIN, PETER F. KRATZ, and  
CATHERINE Q. TIMM, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal from the Examiner's final rejection of claims 1, and 10-18 and the Examiner's objection to claims 11-13. For the reasons explained below, our jurisdiction extends only to the rejection of claims 1, and 10-18. *See* 35 U.S.C. § 134(a) (2006).

With respect to the rejection, we reverse.

## BACKGROUND

The claims are directed to an ink jet ink composition. The composition contains water, a humectant, and a hyperbranched polymeric dye. Claim 1 is illustrative of the subject matter on appeal:

1. An ink jet ink composition comprising water, a humectant, and a water-soluble hyperbranched polymeric dye comprising a hyperbranched polymer having a dye chromophore and a hydrophilic group incorporated into the polymer base chain.

The Examiner rejects claims 1, and 10-18 under 35 U.S.C. § 112, ¶ 1 on the grounds that the claims fail to comply with the written description requirement of the statute. Specifically, the Examiner finds no support in the original Specification for “water-soluble” and “a hydrophilic group” as those terms are used in claim 1, the only independent claim.

The Examiner also objects to claims 11-13 under 37 C.F.R. § 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim.

## DISCUSSION

With regard to the rejection under 35 U.S.C. § 112, ¶ 1, Appellants contend that the general discussion of the polymers as well as specific examples of water-soluble polymers and hydrophilic groups in the Specification provide support for the claimed subject matter (Br. 6). The Examiner contends that support is limited to the specific hydrophilic groups and water-soluble polymers disclosed and that support does not extend broadly to all hydrophilic groups and all water-soluble polymers as claimed (Answer 4-5 and 10).

Appellants further contend that the objection to claims 11-13 under 37 C.F.R. § 1.75(c) is properly appealed because the objection should have been made as a rejection under 35 U.S.C. § 112, ¶ 2 (Br. 2). The Examiner contends that this issue relates to petitionable subject matter under 37 C.F.R. § 1.181 and is not appealable (Answer 3).

Therefore, this appeal presents us with two issues:

1. Is there adequate written descriptive support for “water-soluble” and hydrophilic” as those terms are used in claim 1? and
2. Do we have jurisdiction to review the objection under 37 C.F.R. § 1.75(c)?

*The Issue of Adequate Written Descriptive Support*

The issue of adequate written descriptive support under 35 U.S.C. § 112, ¶ 1 is a factual question which must be decided on a case-by-case basis.

We find the following facts:

Claim 1 is directed to an ink composition including, among other things, a water-soluble hyperbranched polymeric dye. The dye comprises “a hyperbranched polymer having a dye chromophore and a hydrophilic group incorporated into the polymer base chain.”

The Specification discloses two embodiments of the hyperbranched polymer, one in which the dye chromophore is attached to the polymer backbone as a pendant group (Specification 4:20 to 6:16), and another in which the dye chromophore is incorporated into the polymer backbone (Specification 6:17 to 9:2).

Before Appellants inserted “and a hydrophilic group” into the claim and changed “backbone” to “base chain” (*see* Amendment of July 2, 2004), the claim read “a dye chromophore incorporated into the polymer backbone,” as is consistent with the second embodiment of the polymer described in the Specification.

To support their arguments, Appellants rely upon the portions of the Specification directed to the second embodiment, namely the Specification at page 6, line 22 to page 7, line 12; the specific structures on pages 8 and 9; and the Examples at page 11, line 19 to page 12, line 29.

The Specification describes ink jet ink compositions. The inks are dye-based. According to the Specification “[a] dye is a colorant which is dissolved in the carrier medium.” (Specification 2:12-13). Appellants’ carrier medium is water (Claim 1). The Specification discloses that polymeric dyes were known in the art and their solubility is tunable (Specification 3:4-7). The Specification discloses that for the polymeric dye of the invention “[a]ny hyperbranched polymer may be used” (Specification 4:5-7) and then further discloses that those in a copending application entitled “Water Soluble and Dispersible Highly Branched Polyamides” may be used (Specification 4:14-19). Then the Specification describes preferred embodiments of polymers having a variety of chemical groups, including carbonyl groups, groups the Examiner acknowledges are hydrophilic (Specification 6:22 to 7:2) and generic classes of polymers such as polyamides, polyesters, polyethers, etc. (Specification 7:13-16) which contain hydrophilic groups and can be water-soluble as well as chemical specific species containing hydrophilic groups (Specification 8-9).

The Specification describes both a broader genus, i.e., “any hyperbranched polymer,” and narrower subgenera of the claimed water-soluble variety having a hydrophilic group in the backbone or base chain.

We next turn to the relevant principles of law.

“The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.” *In re Kaslow*, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983). The examiner bears the initial burden of presenting a prima facie case of lack of written descriptive support. *In re Alton*, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996) (quoting *In re Wertheim*, 541 F.2d at 263, 191 USPQ at 97.).

It is well settled that the “disclosure of a species may be sufficient written descriptive support for a later claimed genus including that species.” *Bilstad v. Wakalopulos*, 386 F.3d 1116, 1124, 72 U.S.P.Q.2d 1785, 1791 (Fed. Cir. 2004). There are several exceptions to that general rule. If the difference between members of the group is such that the person skilled in the art would not readily discern that other members of the genus would perform similarly to the disclosed members, i.e., if the art is unpredictable, then disclosure of more species is necessary to adequately show possession of the entire genus. *Id.*, at 1125, at 1791. Additionally, there is no support if the specification specifically distinguishes the prior art as inferior and touts the advantages of the species. Such statements make clear that the written description discloses *only* the species and nothing broader. *Id.*

As a first matter, we interpret the clause “incorporated into the polymer base chain” as modifying both the dye chromophore and the

hydrophilic group recitations. This is consistent with the amendment history of the claim and the arguments of Appellants. We, therefore, conclude the claims are limited to the second embodiment in which the chromophore dye is incorporated into the polymer backbone. Because the claim is limited to the second embodiment, we place more weight on the disclosure of the second embodiment than on the disclosure of the first embodiment in our review of the question of whether there is written descriptive support of the subject matter of claim 1. We consider the Specification as a whole weighting various disclosures as appropriate.

We find that the Examiner did not meet the burden of establishing a prima facie case of lack of written descriptive support under 35 U.S.C. § 112, ¶ 1. The rejection never truly discussed the understandings of persons skilled in the art and did not adequately answer the question of whether the written description would reasonably convey to a person skilled in the art that Appellants had possession of the claimed subject matter at the time of filing. The Examiner did not address any indicia of lack of written description such as unpredictability in the art.

The tenor of the Specification suggests not only that a wide range of hyperbranched polymers can be used including those with hydrophilic and hydrophobic groups, but that a variety of water-soluble ones are contemplated. This is evidenced by the disclosure that “any hyperbranched polymer may be used,” a disclosure suggesting a large genus, and by the variety of subgenus disclosures including water-soluble polyamide, classes of polymers which include hydrophilic groups such as polyamides, polyesters, and polyethers, the generic formula  $M^1-R^7-M_m^2$  wherein  $R^7$  can be a carbonyl group, and the specific polymers depicted on pages 8 and 9

which include hydrophilic groups. The Specification immediately conveys to one of ordinary skill in the ink jet ink art the knowledge that Appellants invented inks including water-soluble hyperbranched polymers containing hydrophilic groups in the backbone and the Examiner has not presented evidence sufficient to show that those of ordinary skill in the art would think otherwise.

In conclusion, we find that the Examiner has failed to establish a lack of adequate written descriptive support for “water-soluble” and “hydrophilic” as those terms are used in claim 1.

*The Objection under 37 C.F.R. § 1.75(c)*

The Examiner objected to claims 11-13 under 37 C.F.R. § 1.75(c) on the grounds that these claims are of improper dependent form because they fail to further limit the subject matter of a previous claim. Appellants contend that the objection is reviewable on appeal because the objection should have been made as a rejection under 35 U.S.C. § 112, ¶ 2.

35 U.S.C. § 134(a) states that “[a]n applicant for a patent, any of whose claims has been twice *rejected*, may appeal from the decision of the primary examiner to the Board of Patent Appeals and Interferences.” (emphasis added). 35 U.S.C. § 132 specifically separates objections and requirements from rejections in its statement that “[w]hen, on examination, any claim for a patent is rejected, or any objection or requirement made, the Director shall notify the applicant thereof.” Objections and requirements are not subject to appeal, they are petitionable matters. 37 C.F.R. § 1.181 (2006).

Claims 11-13 have not been rejected, they have been objected to on the basis that they are in improper form. Such an objection is properly the

basis for review by petition to the Director rather than by appeal to the Board. The question of whether or not the Examiner should have made a rejection under 35 U.S.C. § 112, ¶ 2 is a moot point. No such rejection was made and, therefore, there is no such rejection for us to review.

### CONCLUSION

In summary, we reverse the decision of the Examiner with respect to the rejection of claims 1, and 10-18 under 35 U.S.C. § 112, ¶ 1. We do not have jurisdiction to review the objection under 35 C.F.R. § 1.75(c) and, therefore, we have not reviewed the issues arising from the objection.

REVERSED

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